

## CLAIMS

1. A cascaded voltage controlled oscillator comprising:

a first oscillator stage having a first oscillator stage first input, a first oscillator stage second input and a first oscillator stage output;

5 a second oscillator stage having a second oscillator stage input and a second oscillator stage output wherein the first oscillator stage output is input to the second oscillator stage input and wherein the second oscillator stage output is fed back to the first oscillator stage second input;

10 a third oscillator stage having a third oscillator stage input and a third oscillator stage output wherein the second oscillator stage output is fed to the third oscillator stage input.

2. A cascaded voltage controlled oscillator as recited in claim 1 wherein the oscillator stages are LC tank oscillators.

3. A cascaded voltage controlled oscillator as recited in claim 1 wherein there are  
15 four oscillator stages.

4. A cascaded voltage controlled oscillator as recited in claim 1 wherein the oscillator stages are single ended. *look for spec*

5. A cascaded voltage controlled oscillator as recited in claim 1 wherein the phase relationship of signals being fed to the first oscillator stage first input and the first oscillator stage second input is such that the total input to the first oscillator is enhanced.  
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6. A cascaded voltage controlled oscillator including:

a plurality of oscillator stages each having a first oscillator stage input and a second oscillator stage input wherein the output of each first oscillator stage is input to the second oscillator stage input of a following oscillator stage and wherein each first oscillator stage input utilizes NMOS transistors and wherein each second oscillator stage input utilizes PMOS transistors.  
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